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## **Statement of sources**

I declare that this research report is my own work and that, to the best of my knowledge and belief, it does not contain material from published sources without proper acknowledgement, nor does it contain material which has been accepted for the award of any other higher degree or graduate diploma in any university.

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Murray Kirkwood

Date: \_\_\_\_\_

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**Examining the role of Extraversion and Affiliation Motivation as predictors of  
Social Anxiety**

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### **Abstract**

This study examined the role of extraversion and Hill's (1987) aspects of affiliation motivation, which include emotional support, attention, positive stimulation, and social comparison motivations, as predictors of social anxiety. Undergraduate students ( $N = 310$ ) completed measures of extraversion and Hill's (1987) aspects of affiliation motivation, with responses analysed through hierarchical regression. The regression model showed that extraversion and affiliation motivation significantly predict social anxiety. More specifically, being less extroverted and possessing an interpersonal style oriented toward attention seeking significantly predicted social anxiety. The sample for this study was drawn from an Australian university and not specifically from a clinical population. Replicating this research in a clinical context could provide insight into both the collective and individual differences around social anxiety, extraversion and affiliation motivation. Also, this approach could better inform clinical interventions and facilitate therapy tailored to address, for example, low extraversion or specific aspects of affiliation motivation contributing to an individual's social anxiety.

Early and contemporary researchers (Liebowitz et al., 1985; Spence & Rapee, 2016) have reported that whilst the anxiety disorders (e.g. Agoraphobia, Generalised Anxiety, Illness Anxiety, Post Traumatic Stress Disorder) and the specific phobias have enjoyed considerable research progress, focussed investigation into the causal pathways, and more specifically, the predictors of social anxiety disorder, is necessary. In support of this need, uncertainty surrounding the broader predictors of social anxiety persists, and this continues to influence the diagnosis, prevalence and course of the condition (Clark & Beck, 2011; Griez, Faravelli, Nutt, & Zohar, 2001; Spence & Rapee, 2016; Stein & Stein, 2008). Consistent with the knowledge gaps described by researchers above (Clark & Beck, 2011; Stein & Stein, 2008), Hill (1987) also identified that affiliation motivation research has featured more in terms of mood related disorders, such as major depressive disorder, rather than in the context of anxiety disorders. Of clinical importance is the extent to which this knowledge deficiency impacts therapeutic strategy, the development of treatment plans, and the formulation and delivery of effective clinical intervention. This highlights the need for ongoing clinical research that identifies the social cognitive variables most predictive of social anxiety. The aim of the current study was therefore to examine the role of extraversion and Hill's (1987) aspects of affiliation motivation as predictors of social anxiety.

### **Taxonomical Clarification**

#### **Social Anxiety and Social Anxiety Disorder**

Classified in the Diagnostic and Statistical Manual of Mental Disorders (5th ed.; DSM-5; American Psychiatric Association, 2013) as a phobic disorder, Spence and Rapee (2016) regard social anxiety disorder as the most prevalent of the anxiety disorders. Individuals with social anxiety disorder are irrationally and persistently fearful of being negatively evaluated by others, and consequently engage in maladaptive



safety behaviours, such as avoidance, to prevent anxiety that manifests in response to this perceived scrutiny (Stein & Stein, 2008). According to the DSM-5 (2013), the lifetime prevalence of social anxiety disorder ranges between 7% and 12% of the population and affects females and males roughly equally, with the gender ratio ranging between 1:1 and 3:2 (female: male) across Western populations. Occasionally occurring in early childhood, the disorder is most likely to establish during the teen years. Symptoms characteristic of social anxiety disorder during these years include refusal to attend school, over anxiousness, mutism, separation anxiety and general shyness (Davidson, Hughes, George, & Blazer, 1993). Left untreated, social anxiety disorder follows a chronic and unremitting course, inevitably resulting in significant impairment in social and vocational functioning (Stein, Torgrud, & Walker, 2000). In support of Stein et al., (2000), Faravelli, Zucchi, Perone, Salmoria and Vivian (2001) emphasised several adverse life functioning outcomes associated with social anxiety. Increasing isolation and detachment, features commonly associated with social anxiety disorder, can result in dysfunction at the individual and family level through progressive disengagement and worsening communication over time. Social anxiety is equally detrimental vocationally, with limited employment opportunities available to affected individuals.

At sub-clinical levels, of greatest concern to the socially anxious is that some form of social faux pas, something said or done, will provoke harsh scrutiny, which in turn would elicit extreme embarrassment or humiliation for the individual concerned (Stein & Stein, 2008). So pervasive are the effects of these social misperceptions, that settings conducive to interpersonal encounters are deliberately avoided or, where avoidance is not an option, tolerated with great discomfort (Faravelli et al., 2001).

Earlier researchers (Connor, Kobak, Churchill, Katzelnick, & Davidson, 2001; Faravelli et al., 2001) indicated that social anxiety disorder had struggled to gain research prominence and that as a functionally impairing, but highly treatable psychological syndrome, the condition should attract increased focus. Consistent with the need for increased research focus, contemporary researchers (Naragon-Gainey, Rutter, & Brown, 2014) recognise the roles played by social variables in the onset and development of social anxiety disorder, including for example, extraversion and Hill's (1987) dimensions of affiliation motivation.

### **The extraversion-introversion continuum**

Wilt and Revelle (2008) suggested that extraversion and introversion are stable and fundamental dimensions of personality and, as such, explain variation across a wide variety of behaviours and psychological disorders. These researchers cited boldness, energetic, secure and social proficiency as prevalent characteristics that describe the behaviour and general disposition of extroverts. Similarly, yet from a cognitive perspective, Uziel (2006) described extroverts as taking a positive perspective on life and generally adjudge neutral events in a more positive light than do introverts. In terms of motives and goals, extroverts are associated with a drive for affiliation, social contact, validation, status and power (Olson & Weber, 2004), intimacy and interdependence (King, 1995) and increased positive mood and interpersonal contact (King & Broyles, 1997). In contrast, and at the opposite pole of this continuum, introversion is associated with social ineptitude, inwardness, internalisation and introspection (Stemberger, Turner, Beidel, & Calhoun, 1995).

The extraversion-introversion continuum is linked to the aetiology of both mood and anxiety related disorders, including social anxiety disorder (Naragon-Gainey, Rutter, & Brown, 2014). Examining the interaction of extraversion and the fear of

sensations associated with anxiety (anxiety sensitivity) in predicting social anxiety, Naragon-Gainey et al., (2014) showed that higher levels of anxiety sensitivity and introversion strengthen the inverse relationship between extraversion and social anxiety. The authors found that the social fears component of anxiety sensitivity was responsible for this effect. In support of Naragon-Gainey et al., (2014), other researchers (Ozer & Benet-Martinez, 2006; Wilt & Revelle, 2008) have captured the extent to which extraversion influences effective functioning, information processing and wellbeing across a broad range of social domains. Compared to those more introverted, extroverts tend to enjoy improved information processing, attentional resources and working memory. This, according to Matthews, Deary and Whiteman (2003) accounts for greater conversational skills, rapid response times and functioning efficiency that is observed in extroverts. In turn, adaptive benefits derived from these features include increased success in social and high information environments, dating and mating as well as in high pressure occupations (Matthews et al., 2003).

Research (Faravelli, Zucchi, Perone, Salmoria & Vivian, 2001; Stein et al., 2000) has confirmed the role of extraversion in the manifestation and maintenance of social anxiety. In addition, more recent investigation by Naragon-Gainey et al. (2014) confirmed links between extraversion, anxiety sensitivity and the prediction of social anxiety. Investigating the interaction of extraversion and anxiety sensitivity in predicting social anxiety symptoms, regression analyses examined the main effects and interaction of extraversion and anxiety sensitivity on social anxiety. The researchers found that at higher levels of anxiety sensitivity, the inverse relationship between extraversion and social anxiety was stronger, and that social concern (one component of anxiety sensitivity) accounted for this effect. Reiss, Peterson, Gursky and McNally (1986) extended the concept of fear of fear and phobophobia, as described by Griez

(1983), by identifying anxiety sensitivity as the notion of impending experience of anxiety being harmful in itself. This has important implications in both the context of predictors of social anxiety (the current study), and in terms of case formulation and treatment planning for social anxiety. As indicated by Reiss et al., (1986) social anxiety experienced by an individual who is introverted may, in light of their level of anxiety sensitivity, be more prone to social anxiety than an individual less anxiety sensitive. The individual less anxiety sensitive is less fearful of fear. In turn, traditional approaches to treating social anxiety may require refinement based upon whether an individual is anxiety sensitive, their level of anxiety sensitivity and whether the anxiety sensitivity has its origins in either cognitive or behavioural associations (Reiss et al., 1986). As a construct, anxiety sensitivity creates new research opportunities concerning the interplay between extraversion, anxiety sensitivity and social anxiety. In turn, consideration of these relationships under existing personality models and biological bases, including reinforcement sensitivity theory (Gray & McNaughton, 2003), comprising the 3 systems of fight-flight-freeze, behavioural inhibition system and the behavioural approach system will be required. Taken together, the discussion above demonstrates the role of extraversion in social anxiety, and whilst investigation into how the mechanisms of social anxiety differ as a function of extraversion may be warranted, less is known of the predictive effect of other social variables, such as Hill's (1987) aspects of affiliation motivation, in the manifestation and course of social anxiety.

### **Affiliation Motivation**

According to Hill (1987), affiliation refers to feeling gratified, connected and belonging through harmonious relationships and communion. O'Connor and Rosenblood (1996) proposed their Social Affiliation Model, and identified affiliation as a homeostatic process whereby individuals strive for an optimal range of contact.

Deviation from this range results in individuals acting or becoming motivated to restore balance. In practice, an individual may experience an oversupply of contact and, to restore affiliation homeostasis, will seek solitude. Clearly, the extent to which an individual requires affiliation can change periodically. There are times when affiliation may be actively sought out, and times when it is avoided (O'Connor et al., 1996).

O'Connor et al., (1996) revealed not only the extent to which affiliation needs change over time, but also how the level of affiliation need is influenced by the degree to which an individual believes that affiliation is what they desire and need. Moreover, Rofe (1984) claimed that need for affiliation changes, and its strength is dependent upon whether the company of others would be of benefit to a particular situation or circumstance. The pursuit of affiliation is thus influenced by context and circumstance, for example, communities affected by disaster are inclined to put differences aside and work together for the good of all after these experiences. This behaviour is consistent with the notion of anxiety driven fear increasing the need to affiliate with those experiencing similar stressors or stressful events (Baker, 1979).

Early theory surrounding four social reward dimensions, relevant to the need for social contact, identify as the cornerstones of affiliation motivation (Hill 1987). These dimensions included positive affect through closeness and communion, praise and attention, social contact and social comparison. According to Hill (1987), the positive affect dimension of affiliation motivation emanates from the works of Murray (1938), Buss (1986) and Foa & Foa (1973), which centred largely on gratification and feelings of affection, liking and belongingness. The attention dimension, tapping into early research by Shipley and Veroff (1952) and Mehrabian (1976), stems from fear of rejection, approval seeking behaviour and research relating to the Thematic Apperception Test (Hill, 1987). The social contact dimension has its origins in the

works of Buss (1938) and Veroff et al., (1980) and derives from research investigating the reduction of negative emotion and stress through affiliation. The social comparison dimension descends from research (Festinger, 1954; Kissel, 1965; Schacter, 1959) relating to feedback from others on self-relevant issues surrounding beliefs, opinions and similar social attributes (Hill, 1987). Taken together, the above research identifies affiliation motivation as a multidimensional construct originating from within early theory and confirms Hill's (1987) understanding of affiliation motivation as comprising four interpersonal orientations. These include Social Comparison (reducing ambiguity by obtaining self-relevant information), Emotional Support (obtaining positive emotional stimulation), Positive Stimulation (obtaining enjoyable affective and cognitive stimulation), and Attention (obtaining feelings of self-worth and importance through the praise and focus of others). Hill (1987) reported that factor analysis supported the notion of affiliation motivation underpinning his four social cognitive aspects and found support the convergent validity and discriminant validity of his Interpersonal Orientation Scales.

Despite the need for human affiliation having long been recognised (Larson, Zuzanek & Mannell, 1985), along with numerous conceptualisations of affiliation motivation proposed (Hill, 1987; O'Connor, & Rosenblood, 1996; Schachter, 1959), the contribution of affiliation motivation as a predictor of social anxiety remains poorly understood. According to Vaughan et al. (2005), the early work of Schacter (1959) identified a link between isolation and anxiety, whereby affiliation serves to reduce anxiety associated with being alone. Schacter (1959) hypothesised that the company of others serves either as a distraction from worry, which prevents the development of anxiety, or as an index of social comparison, and found evidence for the latter prediction.

### **Social Comparison Orientation**

Developed by Festinger (1954), social comparison refers to evaluations made between oneself and others, and represents the basis of self-evaluation in the absence of objective evaluative standards (Antony, Rowa, Liss, Swallow, & Swinson, 2006). Research has demonstrated that social comparison features strongly in the practice of social relating, both between groups (Antony et al., 2006; Sidanius, Pratto, & Bobo, 1994) and between individuals (Antony et al., 2006; Wood, 1989). For example, Antony et al., (2006) investigated social comparison processes in 59 individuals experiencing social anxiety, relative to 58 nonclinical controls, and found that those afflicted with social anxiety made significantly more upward comparisons, that is, individuals appraising themselves as not measuring up to others. Significantly fewer downward comparisons were made, that is self-appraisal where individuals assess themselves as superior to others.

According to Antony et al., (2006), social comparison research has traditionally scrutinised the involvement of social comparison and, for example, the manner in which individuals negatively self-appraise. Similarly, other researchers (Tesser, Millar & Moore 1988; Wills, 1981) have reported on the relationship between social comparison, self-regard and how individuals think and feel about themselves relative to social comparison. Here, differences were found to exist in the effect of upward and downward comparison on self-regard, mood and anxiety. For example, when individuals compare themselves to others whom they may consider to be worse off than them, so as to feel better about their situation, they are making downward social comparisons (Wills, 1981). Thus, downward self-comparison can increase self-regard. Similarly, Tesser et al., (1988) reported that social comparison against those better off, superior, or advantaged (upward comparisons) might lower self-regard. It thus becomes evident that

social comparison, and specifically in the context of the present study, the extent to which an individual is oriented toward or away from social comparison, may influence subjective well-being and potentially, an individual's level of social anxiety. Across several theoretical models (Self- Evaluation Maintenance Model – Tesser, Millar & Moore, 1988; Proxy Model - Wheeler, Martin & Suls, 1997; Three- Selves Model – Blanton, 2001), researchers refer broadly to self-enhancement, self-evaluation and upward and downward comparison as being the core functions of social comparison. In addition, Aspinwall and Taylor (1993) considered self-esteem, mood and threat as primary moderators of social comparison, particularly in respect to making upward or downward comparisons. Examining how social comparison (upward and downward) is used to influence negative affect (mood), these researchers found that individuals with low self-esteem and negative mood reported improved mood after downward comparison. Clearly social comparison, and more specifically, one's orientation to social comparison behaviour, might contribute to the development of social anxiety, and this emphasises the value of further research into the relationship between social comparison and social anxiety.

### **Emotional Support Orientation**

Strine, Chapman, Balluz and Mokdad (2008) defined emotional support as the exchange of assistance and resources through interpersonal interaction and social relationships. These authors spoke for the adaptive benefits of emotional support and reported that it improves one's physiological and mental health. Importantly, the manner in which individuals cope with anxiety, their maintenance of behavioural change and thus compliance with psychological and medical treatment is influenced by the quality and level of emotional support sought or received (Akey, Rintamaki, & Kane, 2013). Pointing to complex interplay between emotional support orientation and mental health,



researchers have reported on how the perceived presence or absence of emotional support influences health seeking behaviour (Akey et al., 2013) and also social anxiety (Torgrud et al., 2004). Akey et al., (2013) emphasised the importance of orientation to emotional support seeking by showing how those with eating disorders, through having low perceived susceptibility to their disorder, and being in denial about their illness, can orientate away from much needed social support. Torgrud et al., (2004) showed that those with social anxiety experience deficits in perceived social and emotional support, which in turn, may influence their orientation concerning emotional support seeking. Emphasising the beneficial effect of proactive orientation toward emotional support, other researchers (Langford, Bowsher, Maloney, & Lillis, 1997; Strine et al., 2008) identified the positive association between emotional support orientation and quality of life. Also, Hill (1987) indicated that this association reduces negative emotions associated with fear-provoking or stressful situations. Despite these identifiable links between emotional support orientation, social anxiety and psychological wellbeing, the above researchers (Strine et al., 2008; Torgrud et al., 2004) highlight the paucity of research specifically investigating emotional support orientation and its positive contribution to the mitigation of social anxiety. To this end, further investigation into the effect of emotional support orientation and social anxiety is well warranted.

### **Positive Stimulation Orientation**

Hill (1987) framed the association between affiliation motivation and positive stimulation as the effect that affiliation has on facilitating enjoyable mood and associated thought processes. He referred to positive stimulation creating positive affect, and being associated with interpersonal closeness. This association is not new and, according to Hill (1987), positive stimulation dimension emanates from a model of affiliative need proposed by Murray in 1938. Within this framework, Hill (1987)

described affiliation motivation as the process of obtaining positive stimulation and fulfilment from harmonious relationships through a sense of closeness. Theory and research emanating from the early Murray tradition tends to group the benefits of positive stimulation and attention reward into a single category of positive affective (mood) orientation toward others (Hill, 1987). More recently, Ravindran and da Silva (2013) identified benefits relating to the mitigation of anxiety and depression through some therapies that enhanced positive social stimulation. In a systematic review of alternative and adjunctive therapies to pharmacotherapy for mood and anxiety disorders, these researchers identified positive stimulation alternative therapies, such as supervised exercise and physical activity, as potentially effective add on therapies to pharmacotherapy. However, the researchers reported the literature to be limited, with studies often showing methodological weaknesses. Highlighting the importance of investigating links between social anxiety and positive stimulation orientation, Ravindran et al., (2013) found that whilst several positive stimulation related therapies augment depressive disorder treatment, such evidence is largely absent in anxiety disorder research. In the context of the present study, failure to consider the impact of an individuals' specific orientation to positive stimulation seeking behaviour on anxiety, suggests that important, unanswered clinical questions surrounding the relationship between positive stimulation orientation and social anxiety remain unanswered.

### **Attention Orientation**

Demonstrating the link between affiliation motivation and attention seeking behaviour, Hill (1987) reported that attention reward is implicated in the conceptualisation of affiliation motivation, and that attention, as a motivator for affiliation, is closely linked to competitiveness. In the context of the present study, Schwartz, Lindley and Buboltz (2007) reported that individuals who experience

relationship related anxiety are driven to associate with others most strongly by seeking attention, then by social comparison, followed by positive stimulation.

Schwartz et al. (2007) found differences between attachment styles and affiliation motivation. Anxious attachment was positively associated with seeking attention, positive stimulation and social comparison. Avoidant attachment was found to be inversely associated with positive stimulation and emotional support. Those with secure attachment styles were found to score higher across several aspects of affiliation motivation compared to those insecurely attached. This finding lends further weight to the importance of the current study and supports investigation into associations between attention, social anxiety and indeed, the extent to which all of the affiliation motivation variables offered by Hill (1987) might converge to predict social anxiety.

In summary, extraversion, Hill's (1987) dimensions of affiliation motivation and the extent to which an individual is oriented toward seeking emotional support, positive stimulation, attention and engaging in social comparison has the potential to influence one's susceptibility to social anxiety. It is thus important to identify which of these variables are most at play in terms of predicting that susceptibility and secondly, to understand how an individual's propensity to engage in these behaviours might render them susceptible to social anxiety.

### **The Current Study**

Personality and extraversion are largely stable domains (McRae & Costa, 1994; Rice & Markey, 2009; Schank, 2009). Therefore, there is little, other than perhaps teaching an introvert social skills (Rice et al., 2009), that would assist introverts to overcome their social anxiety. Although empirical support exists for the extent to which extraversion is stable and the relationship between extraversion and social anxiety is well documented, what remains unclear is the nature of the relationship between social

anxiety and Hill's (1987) four affiliation motivation variables. Importantly, uncertainties persist in terms of how best to target these affiliation variables and so allow for investigation into their relationship with social anxiety. Improved understanding of the relationship between social anxiety and Hills (1987) aspects of affiliation motivation may have important implications for clinical practice and psychological intervention. Gaining insight into how engaging in social comparison, seeking emotional support, positive stimulation, and attention collectively work to predict social anxiety, may inform the development of new treatment plans or the tailoring of existing treatment strategies to better manage the debilitating effects of social anxiety.

Identifying a shared role of extraversion and Hill's (1987) aspects of affiliation motivation as predictors of social anxiety could well reveal interpersonal styles that contribute most to an individual's susceptibility to social anxiety. The aim of this study was to extend the examination of social anxiety's relationship with extraversion and Hill's (1987) aspects of affiliation motivation including emotional support, attention, positive stimulation and social comparison. Identifying the extent to which these variables explain and indicate susceptibility to social anxiety offers a unique contribution to this field and might serve to inform case formulation, therapeutic strategy, and the development of effective clinical treatment plans. To investigate these relationships several hypotheses were generated and a two-step hierarchical multiple regression was conducted.

### **Hypotheses**

It was hypothesised that the combination of extraversion, social comparison orientation, emotional support, positive stimulation, and attention would explain significantly more of the variance in social anxiety than the variance explained by extraversion alone. Within the final model, and in accordance with Naragon-Gainey,

Rutter, and Brown (2014), it was predicted that those reporting low extraversion, as measured by the HEXACO 60, (Ashton & Lee, 2009) would report significantly higher social anxiety (as measured by the Mini-SPIN) than those reporting higher extraversion. Finally, those reporting greater orientation toward seeking emotional support, attention, positive stimulation and engaging in social comparison (as measured by the Interpersonal Orientation Scale), were expected to report significantly higher levels of social anxiety than those reporting less orientation and engagement.

## **Method**

### **Participants**

The sample comprised 310 undergraduate students (83 male, 225 female, 2 other) recruited from the University of Tasmania. Participants completed online scales and ranged in age from 18 to 65 years ( $M = 24.02$  years,  $SD = 8.93$ ). There were no selection criteria.

### **Materials and procedure**

Ethical approval was obtained from the University's Ethics Committee prior to commencement of the study and, after providing informed consent, participants responded to the online study questionnaires.

### **Personality**

Respondents of the current study completed the extraversion scale of the HEXACO-60 (Ashton & Lee, 2009), a 60-item instrument that assesses six dimensions of personality, including Agreeableness, Conscientiousness, Emotionality, Extraversion, Honesty-Humility and Openness to Experience. A sample item drawn from the extraversion scale of the HEXACO-60 includes: 'I feel reasonably satisfied with myself overall.' Four items within the scale are reverse-keyed and items are assessed using a 5-

point Likert scale from 1 (strongly disagree) to 5 (strongly agree). Each factor is scored based on higher numbers representing greater quantities of a particular trait. Ashton and Lee (2009) reported Cronbach's alpha for extraversion at .80, indicating good reliability. The full list of extraversion items is presented in Appendix A.

### **Social Anxiety.**

The *Mini-SPIN* (Connor, Kobak, Churchill, Katzelnick & Davidson, 2001), an abbreviated version of the Social Phobia Inventory (SPIN), is a 3-item ("I avoid activities in which I am the centre of attention"; "Fear of embarrassment causes me to avoid doing things or speaking to people" and "Being embarrassed or looking stupid are among my worst fears"), self-rated screening instrument designed to identify individuals at increased risk of social anxiety disorder. Applying a threshold score of six or greater, the instrument returned 90% accuracy in identifying the absence or presence of social anxiety across a managed care population (Connor et al., 2001; Weeks, Spokas & Heimberg, 2007). The 3 items are rated on a 5-point Likert scale: 0 = not at all, 1 = a little bit, 2 = somewhat, 3 = very much, 4 = extremely, with higher scores indicating higher levels of the given item and, according to Seeley-Wait, Abbott and Rapee (2009), the instrument shows excellent construct validity. Compared to similar instruments, Seely-Wait et al., (2009) reported that the Mini-SPIN showed significant positive correlations with the Social Interaction Anxiety Scale ( $r = 0.81, p < .001$ ) and the Social Phobia Scale ( $r = 0.77, p < .001$ ). The instrument showed excellent internal consistency over the three items ( $\alpha = .91$ ), and showed excellent ability to discriminate those with social anxiety disorder from individuals without the disorder (Seely-Wait et al., 2009). Fogliati et al., (2016) reported that the instrument returned good test-retest reliability over a 1–4-week period between initial assessment and pre-treatment ( $r = .82$ ). Taken

together, these findings confirm the Mini-SPIN to be a reliable and valid instrument for screening social anxiety disorder (Seeley-Wait et al., 2009).

### **Affiliation Motivation**

The Interpersonal Orientation Scale (IOS; Hill, 1987) is a 32-item measure of affiliation motivation and was developed to assess for the dispositional aspects of attention, emotional support, social comparison and positive stimulation. Sample items drawn from the scale include: ‘One of my greatest sources of comfort when things get rough is being with other people’ (Emotional Support); ‘I like to be around people when I can be the center of attention’ (Attention); ‘I seem to get satisfaction from being with others more than a lot of other people do (Positive Stimulation); ‘I find that I often look to certain other people to see how I compare to others’ (Social Comparison). Items are rated on a 5-point Likert scale from “not at all true” to “completely true”, and higher scores are reflective of increased affiliative need. Hill (1987) found evidence for the instrument’s construct validity, reliability and predictive ability of affiliative behaviour across a range of settings. Factor analysis across the four dispositional aspects indicated that the IOS does consist of the four distinct aspects labelled above (Hill, 1987).

Additionally, Hill (1987) reported the following internal consistency coefficients for all of the four factors: Attention .74, Emotional Support .90, Positive Stimulation .89, and Social Comparison .81. Swap and Rubin (1983) reported that the instrument returned good test–retest reliability over a 5 week interval period ( $r = .76$ ), suggesting adequate to excellent reliability. The full list of interpersonal orientation scale items is presented in Appendix B.

### **Design and Analysis**

This study used a correlational cross sectional design. A hierarchical multiple regression analysis was conducted. Social anxiety was the outcome variable. In the first

step of the regression, extraversion was the predictor. In the second step, emotional support, attention, positive stimulation and social comparison were additional predictors. An *a priori* power analysis indicated that with five predictor variables in the model, a sufficient sample size to find a medium effect was 109, using the formula  $N = 104 + k$ , where  $k$  represents the number of predictor variables to be included (Green, 1991). The current sample ( $N = 310$ ) therefore met sample size requirements comfortably.



## **Results**

### **Descriptive Statistics**

Descriptive statistics and Cronbach alpha's for the study variables are provided in Table 1. Means, standard deviations and Cronbach alpha's are consistent with corresponding statistics reported by Hill (1987) and Naragon-Gainey et al., (2014) and reliability of the measures ranged between adequate to excellent. As expected, mean social anxiety levels observed in the current, non-clinical study, were found to be lower than social anxiety means reported in related, although clinical research. For example, 7.35 (11.19) in the more recent work of Byrow, Chen and Peters (2016).

**Table 1**

*Descriptive statistics and Cronbach Alphas: Social Anxiety, Extraversion, Emotional Support, Attention, Positive Stimulation and Social Comparison.*

	<i>M</i>	<i>SD</i>	Cronbach's Alpha
Social Anxiety	4.72	2.84	.77
Extraversion	31.99	6.36	.81
Emotional Support	8.06	2.99	.83
Attention	7.28	2.91	.83
Positive Stimulation	9.30	2.89	.79
Social Comparison	8.47	2.83	.78

### **Bivariate Correlations and Assumption Testing**

Zero order correlations are shown in Table 2. All predictors were significantly correlated with social anxiety. Extraversion was inversely and strongly associated, whilst all other predictors were positively associated with strengths ranging across the predictors from weak to strong (Cohen, 1992).

Data checks were conducted and assumptions tested. In accordance with the recommendations of Allen and Bennett (2012), the normal probability plot and scatter plot of standardised residuals against standardised predicted values showed that assumptions of normality, linearity and homoscedasticity of residuals were met. Large tolerances across all predictor variables indicated that multicollinearity would not interfere with explaining the results of the multiple regression analysis.

Bivariate correlations were all less than .80 with VIF values below 10 and tolerance statistics above 0.2, suggesting that multicollinearity did not threaten the current data set (Allen & Bennett, 2012; Field, 2013). The Durbin-Watson statistic (1.983) indicated independence of errors.

**Table 2***Zero order correlations for Social Anxiety, Extraversion, Emotional Support, Attention, Positive Stimulation and Social Comparison*

Variables	1	2	3	4	5	6
1. Social Anxiety	-					
2. Extraversion	-.62 <sup>***</sup>	-				
3. Emotional Support	.10 <sup>*</sup>	.17 <sup>**</sup>	-			
4. Attention	.22 <sup>***</sup>	.06	.59 <sup>***</sup>	-		
5. Positive Stimulation	.14 <sup>**</sup>	.14 <sup>**</sup>	.58 <sup>***</sup>	.52 <sup>***</sup>	-	
6. Social Comparison	.22 <sup>***</sup>	.04	.55 <sup>***</sup>	.70 <sup>***</sup>	.60 <sup>***</sup>	-

\*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$ .

**Prediction of Social Anxiety by Extraversion, Emotional Support, Attention,  
Positive Stimulation and Social Comparison.**

Table 3 contains the full regression details for social anxiety. Extraversion was entered in Step 1. Emotional support, attention, positive stimulation and social comparison affiliation orientations were added in Step 2. Effect sizes were interpreted in accordance with Cohen's (1992) recommendations.

**Table 3**

*Multiple regression model showing the relationship of predictor variables with social anxiety.*

<i>Variable</i>	<i>B</i>	<i>β</i>	Std. Error	<i>t</i>	<i>p</i>
Step 1					
Constant	16.54		0.65	25.34	<0.001
Extraversion	-.276	-.618	0.02	13.78	<0.001
Step 2					
Constant	14.25		0.71	20.08	<0.001
Extraversion	-.289	-.648	0.02	-15.09	<0.001
Emotional Support	.028	.029	0.56	0.51	0.610
Attention	.134	.138	0.06	2.21	0.028
Positive Stimulation	.099	.101	0.56	1.77	0.077
Social Comparison	.071	.071	0.06	1.10	0.272

In the first step of the multiple regression, extraversion accounted for a statistically significant 38.1% of the variance in social anxiety,  $R = -0.62$ ,  $F(1,308) = 189.91$ ,  $p < .001$  and a large effect size was observed ( $f^2 = 0.62$ ). Reporting lower levels of extraversion significantly predicted higher levels of social anxiety. Adding emotional support, attention, positive stimulation and social comparison to the second step of the multiple regression increased the total variance explained to a significant 46.3%,  $R = 0.68$ ,  $F(4, 304) = 11.51$ ,  $p < .001$ ,  $f^2 = .86$ . A very large effect size was observed and a significant 8.2% of additional variance was explained,  $R^2\text{change} = 0.08$ ,  $F\text{ change}(4,304) = 11.51$ ,  $p < .001$ . Within the final model, extraversion and attention seeking

significantly predicted social anxiety. Being less extroverted and possessing an interpersonal style oriented toward attention seeking significantly predicted social anxiety. No other variables contributed significantly within the model. While not contributing to the model with a traditional alpha level of .05, positive simulation affiliation motivation did show a positive relationship with social anxiety approaching significance at  $p = .07$ .

## Discussion

This study examined extraversion and Hill's (1987) aspects of affiliation motivation (emotional support, attention, positive stimulation and social comparison) as predictors of social anxiety. As hypothesised, the combination of extraversion, social comparison, emotional support, positive stimulation, and attention explained significantly more of the variance around social anxiety than the variance explained by extraversion alone. Also, lower levels of extraversion (being more introverted) significantly predicted, and accounted for a large proportion of the variance surrounding social anxiety, a finding that accords with Naragon-Gainey, Rutter and Brown (2014), who found that those more extroverted were less susceptible to social anxiety than those more introverted.

Consistent with the findings of Schwartz, Lindley and Buboltz (2007), an interpersonal style oriented toward attention seeking significantly predicted social anxiety. Scrutiny of the items contained in Hills (1997) Interpersonal Orientation Scale indicates that behaviour contained attention seeking, relates to pursuing attention to feel belongingness and for self-validated purposes. Although attention seeking may also elicit unhelpful cognitions, and so stimulate the perception of social scrutiny amongst the socially anxious (Wells & Papageorgiou, 1998), attention seeking may also be more directly focused and sought from specific individuals, such as family and significant others. In this case, it is suggested that the anxiety catalyst may relate less to the more traditional perception of social scrutiny and fear of judgement, and more to anxiety surrounding a perceived lack of validation and wanting to feel adequate levels of self-esteem and self-worth in the eyes of specific and known individuals.

Positive stimulation did not significantly contribute to social anxiety at a traditional alpha level of .05, although its contribution did approach significance ( $p = .07$ ) and its  $\beta$ , relative to the other variables, suggests that it may be of some predictive utility. On the other hand, being oriented toward engaging in social comparison and showing a propensity to seek emotional support did not contribute significantly to the model.

Researchers (Baumeister & Leary, 1995; Cullum, O'Grady & Tennen, 2011; McClelland, 1985; Stevens & Fiske, 1995) have long since identified the inclination that individuals have to engage in behaviour conducive to positive stimulation, and avoidant of negative stimulation. Emphasising the importance of this phenomenon, Decker, Calo and Weer (2012) found that an entrepreneurial orientation amongst university students was positively associated with the need for positive stimulation from others. The researchers concluded that whilst students with entrepreneurial interests enjoyed social interaction and derived positive stimulation from the behaviour, they were also emotionally dependent upon the social interaction and positive stimulation gained from this behaviour. Thus, despite positive stimulation orientation not significantly predicting social anxiety, these findings, in line with the work of Decker et al., (2012), provide insight into how personal orientation might influence social interaction, emotional support and consequently, how positive stimulation seeking might influence social anxiety, even though it was a non-significant contributor in the current study.

Notwithstanding the fact that, in the final model, emotional support motivation proved to be least predictive of social anxiety, Majercsik and Haller (2004) found that depleted social contacts and emotional support not only resulted in increased illness, but also identified as a risk factor for anxiety. In contrast, having a rich source of emotional



support, and actively seeking it out, was synonymous with reduced levels of anxiety. Apart from the effect of shared variance, it is unclear why this association conflicts with the findings of Majercsik et al., (2004). Taken together, these findings place into context the contribution that emotional support seeking behaviour can make to the manifestation of social anxiety, this despite the results of the current study suggesting emotional support seeking to be least predictive of social anxiety.

In terms of the association between social anxiety and social comparison affiliation orientation, Clark and Arkowitz (1975) reported on the overly negative self-evaluation of conversation skills amongst a highly socially anxious group, relative to a low socially anxious group, and claimed that their results emphasised the role of self-evaluation and social comparison as a mediator of social anxiety. The current study found the relationship between social comparison and social anxiety to be equally as strong as the association between attention seeking and social anxiety. However, in the final model, social comparison was not as predictive of social anxiety as attention seeking, and it is suggested that this contrast perhaps relates to the effect of shared variance. These findings highlight the complex interplay between social skills, social comparison and social anxiety, and point to the need for treatment strategies, and indeed, psychoeducation that provides insight into how an individual's leaning toward upward and downward social comparison influence an individual's susceptibility to social anxiety. At the bivariate level of the current study, social comparison, and indeed, emotional support was weakly associated with social anxiety, and it is possible that the effects of shared variance account for this weak relationship.

### **Limitations and Future Directions**

Several limitations to this study require that the results are interpreted with due caution. Firstly, self-report measures were used, and despite the anonymous nature of

responses, the results may contain response bias. Further, it is also possible that the relationships observed were somewhat inflated by shared method variance.

The cross sectional design of this study limits assessment of the data to single point analysis. To detect long-term developments or change, a longitudinal study, extending beyond the single moment analysis, is recommended. Additional limitations arising from the correlational design prevent against drawing causality conclusions.

A high proportion (73%) of the participants in this study were female, which limits generalisability of the results. On the other hand, whilst most studies find significant sex differences in the prevalence of anxiety disorders, with females more likely than males to suffer from anxiety in general and to be diagnosed with most anxiety disorders, Christiansen (2015) found that the same does not necessarily apply to social anxiety. This is consistent with the work of McLean, Asnaani, Litz, and Hofmann (2011) who, in an extensive study ( $N=20,013$ ) on gender differences in burden of illness, comorbidity, course of illness and prevalence found, that apart from social anxiety, women had higher rates of lifetime diagnosis across all of the anxiety disorders.

Related to these considerations regarding the nature of the current sample and their levels of social anxiety, it must be noted that this sample was not drawn from a clinical population. Nonetheless, around 35% of the sample met Weeks et al.'s (2007) criteria for a provisional diagnosis of social anxiety disorder based on scores on the Mini-SPIN. While this seems high given the lifetime prevalence of social anxiety (DSM-5, American Psychiatric Association, 2013), it is similar to other research investigating social anxiety within student populations which has reported that nearly 40% of university students experience moderate to high levels of social anxiety (Dell'Osso et al., 2014). Thus, while the current study should be replicated using a

clinical sample in future research, it seems that the current findings can reasonably inform our understanding of social anxiety.

Finally, this study has been designed such that Hills (1987) affiliation variables are purely interpersonal orientation styles with little consideration afforded to how interpersonal orientation is influenced by other variables, such as personality attributes. In one study, Smith and Ruiz (2007) investigated the influence of interpersonal orientation on subjective, physiological, and nonverbal experiences as a function of experimentally manipulated interpersonal complementarity (enjoying high levels of interpersonal orientation and dealing with someone who is engaging and friendly - Yoo, Park & Jun, 2014), or non-complementarity (high levels of interpersonal orientation and dealing with someone who is less engaging and unfriendly). Seeking a measure characterised by affiliation and neuroticism, Smith et al., (2007) administered Hill's interpersonal orientation scale to find that women in the noncomplementarity condition experienced the interpersonal situation more negatively, compared to the complementarity condition. Also, the noncomplementarity condition reduced desire to seek out attention compared to the complementarity conditions and this, in the context of the present study, raises questions and points to the interplay between interpersonal complementarity, its effect on attention seeking behaviour and consequently, social anxiety.

Collectively, extraversion and Hill's (1987) aspects of affiliation motivation accounted for a significant and large proportion of the variance around social anxiety. In accordance with Schwartz, Lindley and Buboltz (2007), who reported that individuals experiencing relationship anxiety affiliate most strongly by attention seeking, the final model showed that of all the affiliation variables, an interpersonal style oriented toward attention seeking, most strongly and significantly predicted social anxiety. None of the

other affiliation variables were significant predictors in the final model. However, taken together, the collective effect of these predictor's points to a complex relationship, which identifies that the means by which these predictors exert their effect is imprecise. Therefore, the task for both researchers and practitioners alike, perhaps relates more to what can be done to facilitate validational and related needs without individuals necessarily needing to seek attention, emotional support, positive stimulation, or constantly be engaging in social comparison to achieve these needs (See Clinical Implications). Taken together the above discussion warrants further examination into the extent to which Hill's (1987) aspects of affiliation motivation (emotional support, attention, positive stimulation and social comparison) may be influenced by personality and other variables. This consideration raises a number of implications; particularly about how the interaction between Hill's (1987) aspects and other variables, such as personality, might converge to not only influence the manifestation of social anxiety but importantly, its mitigation.

### **Clinical and Other Implications**

This study was conducted using a non-clinical sample and opportunity exists to replicate the research using a clinical sample. Future research providing insight into the differences around social anxiety, extraversion and affiliation motivation could better inform clinical interventions and facilitates therapy tailored to address, for example, low extraversion or specific aspects of affiliation motivation contributing to an individual's social anxiety. Opportunity exists to modify and augment existing anxiety therapy models or indeed, develop new therapeutic strategies that facilitate self-worth and personal validation without necessarily needing to achieve it from seeking the attention of others. This might relate to, for example, acquiring validation through one's own

personal achievements and mastery, or by attaining validation contentment through accepting and realising one's own adequacy as an individual.

Of the relationships considered in this study, the association between extraversion and social anxiety was the strongest (Table 2). According to McCrae and Costa (1994), extraversion, like all other major profiles of personality, is characteristically stable. This stability results in extraversion changing little over time which, in turn, highlights the major challenge faced in regard to mitigating social anxiety that is driven specifically by an individual's introverted personality. Introverts lack, and are unlikely to develop, the personality characteristics that work to protect extroverts from social anxiety (Schank, 2009). Despite a body of evidence supporting this notion, Rice and Markey (2009) suggested that opportunity exists to treat socially anxious introverts through imparting social skills, and by other means, such as through exposure to computer-mediated communication a form of systematic desensitisation. Comparing levels of social anxiety within participants after they had communicated via computer-mediated communication or face-to-face, Rice et al., (2009) found that respondents were less anxious after computer-mediated communication compared to face-to-face communication. Further analysis revealed that this effect was moderated by extraversion, such that introverted participants showed less anxiety when communicating via computer-mediated communication. Consistent with this finding, in more recent research Shalom, Israeli, Markovitzky and Lipsitz (2015) found that those high in social anxiety experienced greater success in computer-mediated communication than in face-to-face, while those low in social anxiety displayed no difference over these conditions. Of clinical importance here is that these findings support the idea of research augmenting existing social anxiety and communication skills therapy to the extent that it becomes effective as a means to treat socially anxious introverts.

## **Summary and Concluding Remarks**

In summary, this study contributes to research concerning the predictors of social anxiety and in particular, the extent to which extraversion and interpersonal orientation style might contribute to the manifestation and maintenance of social anxiety. The current research revealed that extraversion and affiliation motivation significantly predicts social anxiety. Being less extroverted and possessing an interpersonal style oriented toward attention seeking significantly predicts social anxiety and an interpersonal style oriented toward seeking emotional support, positive stimulation and a propensity toward social comparison also predicts social anxiety, although not significantly. Additional research providing insight into the collective and individual differences around social anxiety, extraversion and affiliation motivation could better inform clinical interventions and facilitate therapy tailored to address, for example, introversion or specific aspects of affiliation motivation contributing to an individual's social anxiety.

The results of the current study suggest that the mechanisms of social anxiety, and in particular how these mechanisms may be influenced by interpersonal orientation style, have implications across a broad range of life domains. Left untreated, social anxiety follows a chronic and unremitting course causing significant impairment in both social and vocational functioning (Stein, Torgrud, & Walker, 2000). It thus follows that greater awareness of the means by which individuals develop social anxiety, and how the condition is maintained, is useful. The variables identified as predictors of social anxiety in this study could be targeted for intervention whereby through psychoeducation and other therapeutic approaches, insight and understanding could be provided into how being overly oriented toward an interpersonal orientation style renders one more susceptible to social anxiety.

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## Appendix A: Hexaco-60 Self Report Form

### HEXACO-PI-R (SELF REPORT FORM)

Kibeom Lee, Ph.D., & Michael C. Ashton, Ph.D.

#### DIRECTIONS

On the following pages you will find a series of statements about you. Please read each statement and decide how much you agree or disagree with that statement. Then write your response in the space next to the statement using the following scale:

5 = strongly agree 4 = agree 3 = neutral (neither agree nor disagree) 2 = disagree 1 = strongly disagree

Please answer every statement, even if you are not completely sure of your response.

#### Please provide the following information about yourself.

Sex (circle): Female Male Age: \_\_\_\_\_ years

1 = strongly disagree 2 = disagree 3 = neutral 4 = agree 5 = strongly agree

1 I would be quite bored by a visit to an art gallery. \_\_\_\_\_

2 I plan ahead and organize things, to avoid scrambling at the last minute. \_\_\_\_\_

3 I rarely hold a grudge, even against people who have badly wronged me. \_\_\_\_\_

4 I feel reasonably satisfied with myself overall. \_\_\_\_\_

5 I would feel afraid if I had to travel in bad weather conditions. \_\_\_\_\_

6 I wouldn't use flattery to get a raise or promotion at work, even if I thought it would succeed. \_\_\_\_\_

7 I'm interested in learning about the history and politics of other countries. \_\_\_\_\_

8 I often push myself very hard when trying to achieve a goal. \_\_\_\_\_

9 People sometimes tell me that I am too critical of others. \_\_\_\_\_

10 I rarely express my opinions in group meetings. \_\_\_\_\_

11 I sometimes can't help worrying about little things. \_\_\_\_\_

12 If I knew that I could never get caught, I would be willing to steal a million dollars. \_\_\_\_\_

13 I would enjoy creating a work of art, such as a novel, a song, or a painting. \_\_\_\_\_

14 When working on something, I don't pay much attention to small details. \_\_\_\_\_

- 15 People sometimes tell me that I'm too stubborn. \_\_\_\_\_
- 16 I prefer jobs that involve active social interaction to those that involve working alone. \_\_\_\_\_
- 17 When I suffer from a painful experience, I need someone to make me feel comfortable. \_\_\_\_\_
- 18 Having a lot of money is not especially important to me. \_\_\_\_\_
- 19 I think that paying attention to radical ideas is a waste of time. \_\_\_\_\_
- 20 I make decisions based on the feeling of the moment rather than on careful thought. \_\_\_\_\_
- 21 People think of me as someone who has a quick temper. \_\_\_\_\_
- 22 On most days, I feel cheerful and optimistic. \_\_\_\_\_
- 23 I feel like crying when I see other people crying. \_\_\_\_\_
- 24 I think that I am entitled to more respect than the average person is. \_\_\_\_\_
- 25 If I had the opportunity, I would like to attend a classical music concert. \_\_\_\_\_
- 26 When working, I sometimes have difficulties due to being disorganized. \_\_\_\_\_
- 27 My attitude toward people who have treated me badly is "forgive and forget". \_\_\_\_\_
- 28 I feel that I am an unpopular person. \_\_\_\_\_
- 29 When it comes to physical danger, I am very fearful. \_\_\_\_\_
- 30 If I want something from someone, I will laugh at that person's worst jokes. \_\_\_\_\_
- 31 I've never really enjoyed looking through an encyclopedia. \_\_\_\_\_
- 32 I do only the minimum amount of work needed to get by. \_\_\_\_\_
- 33 I tend to be lenient in judging other people. \_\_\_\_\_
- 34 In social situations, I'm usually the one who makes the first move. \_\_\_\_\_
- 35 I worry a lot less than most people do. \_\_\_\_\_
- 36 I would never accept a bribe, even if it were very large. \_\_\_\_\_
- 37 People have often told me that I have a good imagination. \_\_\_\_\_
- 38 I always try to be accurate in my work, even at the expense of time. \_\_\_\_\_
- 39 I am usually quite flexible in my opinions when people disagree with me. \_\_\_\_\_

- 40 The first thing that I always do in a new place is to make friends. \_\_\_\_\_
- 41 I can handle difficult situations without needing emotional support from anyone else.  
\_\_\_\_\_
- 42 I would get a lot of pleasure from owning expensive luxury goods. \_\_\_\_\_
- 43 I like people who have unconventional views. \_\_\_\_\_
- 44 I make a lot of mistakes because I don't think before I act. \_\_\_\_\_
- 45 Most people tend to get angry more quickly than I do. \_\_\_\_\_
- 46 Most people are more upbeat and dynamic than I generally am. \_\_\_\_\_
- 47 I feel strong emotions when someone close to me is going away for a long time.  
\_\_\_\_\_
- 48 I want people to know that I am an important person of high status. \_\_\_\_\_
- 49 I don't think of myself as the artistic or creative type. \_\_\_\_\_
- 50 People often call me a perfectionist. \_\_\_\_\_
- 51 Even when people make a lot of mistakes, I rarely say anything negative. \_\_\_\_\_
- 52 I sometimes feel that I am a worthless person. \_\_\_\_\_
- 53 Even in an emergency I wouldn't feel like panicking. \_\_\_\_\_
- 54 I wouldn't pretend to like someone just to get that person to do favors for me. \_\_\_\_\_
- 55 I find it boring to discuss philosophy. \_\_\_\_\_
- 56 I prefer to do whatever comes to mind, rather than stick to a plan. \_\_\_\_\_
- 57 When people tell me that I'm wrong, my first reaction is to argue with them. \_\_\_\_\_
- 58 When I'm in a group of people, I'm often the one who speaks on behalf of the group.  
\_\_\_\_\_
- 59 I remain unemotional even in situations where most people get very sentimental.  
\_\_\_\_\_
- 60 I'd be tempted to use counterfeit money, if I were sure I could get away with it.  
\_\_\_\_\_

## **Appendix B: Interpersonal Orientation Scale**

Please rate the statements on how true or descriptive each is for you.

Rating scale: 1 Not at all true; 2 Slightly true; 3 Somewhat true; 4 Mostly true;

5 Completely true

(1) One of my greatest sources of comfort when things get rough is being with other people. \_\_\_\_\_

(2) I prefer to participate in activities alongside other people rather than by myself because I like to see how I am doing on the activity. \_\_\_\_\_

(3) The main thing I like about being around other people is the warm glow I get from contact with them. \_\_\_\_\_

(4) It seems like whenever something bad or disturbing happens to me I often just want to be with a close, reliable friend. \_\_\_\_\_

(5) I mainly like people who seem strongly drawn to me and who seem infatuated with me. \_\_\_\_\_

(6) I think I get satisfaction out of contact with others more than most people. \_\_\_\_\_

(7) When I am not certain about how well I am doing at something, I usually like to be around others so I can compare myself to them. \_\_\_\_\_

(8) I like to be around people when I can be the center of attention. \_\_\_\_\_

(9) When I have not done very well on something that is very important to me, I can get to feeling better simply by being around other people. \_\_\_\_\_

(10) Just being around others and finding out about them is one of the most interesting things I can think of doing. \_\_\_\_\_

(11) I seem to get satisfaction from being with others more than a lot of other people do. \_\_\_\_\_

(12) If I am uncertain about what is expected of me, such as on a task or in a social situation, I usually like to be able to look to certain others for cues. \_\_\_\_\_

(13) I feel like I have really accomplished something valuable when I am able to get close to someone. \_\_\_\_\_

(14) I find that when I am unsure of what is going on I often have the desire to be around other people who are experiencing the same thing I am. \_\_\_\_\_

(15) During times when I have to go through something painful, I usually find that having someone with me makes it less painful. \_\_\_\_\_

(16) I often have a strong need to be around people who are impressed with what I am like and what I do. \_\_\_\_\_

(17) If I feel unhappy or kind of depressed, I usually try to be around other people to make me feel better. \_\_\_\_\_

(18) I find that I often look to certain other people to see how I compare to others. \_\_\_\_\_

(19) I mainly like to be around others who think I am an important, exciting person. \_\_\_\_\_

(20) I think it would be satisfying if I could have very close friendships with quite a few people. \_\_\_\_\_

(21) I often have a strong desire to get people I am around to notice me and appreciate what I am like. \_\_\_\_\_

(22) I do not like being with people who may give me less than positive feedback about myself. \_\_\_\_\_

(23) I usually have the greatest need to have other people around me when I feel upset about something.

(24) I think being close to others, listening to them, and relating to them on a one-to-one level is one of my favorite and most satisfying pastimes. \_\_\_\_\_

(25) I would find it very satisfying to be able to form new friendships with whomever I like. \_\_\_\_\_

(26) One of the most enjoyable things I can think of that I like to do is just watching people and seeing what they are like. \_\_\_\_\_

Note: Emotional support – items 1, 4, 9, 15, 17, 23; Attention – items 5, 8, 16, 19, 21, 22; Positive stimulation – items 3, 6, 10, 11, 13, 20, 24, 25, 26; Social comparison – items 2, 7, 12, 14, 18.